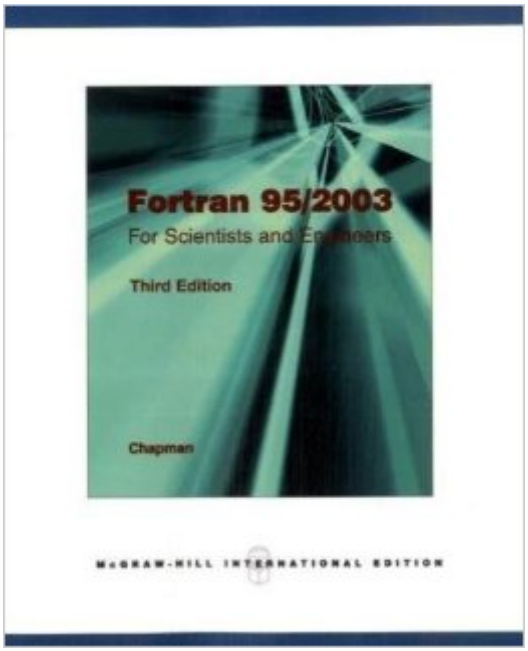
Fortran 95/2003: For Scientists And Engineers



Synopsis

Chapman’s" Fortran for Scientists and Engineers" is intended for both first year engineering students and practicing engineers. It simultaneously teaches the Fortran 95/2003 programming language, structured programming techniques, and good programming practice. Among its strengths are its concise, clear explanations of Fortran syntax and programming procedures, the inclusion of a wealth of examples and exercises to help students grasp difficult concepts, and its explanations about how to understand code written for older versions of Fortran. We are the most current Fortran book in the market.

Book Information

Paperback: 1008 pages

Publisher: McGraw-Hill Higher Education; 3rd edition (January 1, 2007)

Language: English

ISBN-10: 0071285784

ISBN-13: 978-0071285780

Product Dimensions: 7 x 1.3 x 9 inches

Shipping Weight: 3.4 pounds

Average Customer Review: 4.4 out of 5 starsÂ Â See all reviewsÂ (27 customer reviews)

Best Sellers Rank: #1,628,521 in Books (See Top 100 in Books) #53 inÂ Books > Computers & Technology > Programming > Languages & Tools > Fortran #9526 inÂ Books > Textbooks > Engineering #12036 inÂ Books > Computers & Technology > Software

Customer Reviews

Firstly, this book covers Fortran 90 and 95 in great detail, offering many helpful suggestions to those who are used to older versions of Fortran, such as Fortran 77, and highlighting the differences between the 90 and 95 versions. Where this book shines is in the hundreds of examples of and bits of advice on good programming practice spread throughout the book. It’s specifically tailored to those "part-time" programmers, scientists and engineers who do not come from a computer science or software engineering background. Most current (and new) Fortran programmers would benefit greatly by learning the programming style found here. I can’t agree with all the advice, however, such as abandoning the basic "real" and "double precision" data types in favor of the new "kind" parameterized types. Still, the philosophy behind such advice is sound, and good programmers will know when and when not to use specific language features. One subject unfortunately missing from the book is programming for parallel processors, and other techniques to speed programs up. But

most Fortran programmers don’t need to worry about this subject and those who do can get O’Reilly’s "High Performance Computing" and Jon Bentley’s "Writing Efficient Programs". The examples and quizzes within, and the exercises at the end of, each chapter make this a great textbook. The appendices and index make it useful as a reference book. If you program in Fortran 90 or 95, I’d say this book is a must-have.

It is outrightly silly to rate this excellent book one star and insinuate that it is a terrible write-up. Is it the thin index that makes it so bad, or the explanation of do loops using sin(x) series expansion, according to the first reviewer? If you are a scientist or an engineer (the target audience of the book) you’ll probably see the wisdom of such an example instead of counting from 1 to 10 as if we are inside a grocery store.This is an excellent book not just for sake of learning the fortran language but also for writing modern and easily maintanable codes and algorithms. Whether you are a "pure" or "hybrid" programmer, you couldn’t ever ask for something more.I am sure the author will subsequently improve the indexing since most people seem to take an offence in that but the contents are just right.Of course Metcalf/Reid (Fortran 90/95 Explained) is also a very good text but is largely for reference purposes. Metcalf/Reid DOES NOT and will not teach you the nitty-gritty of fortran programming. In Metcalf/Reid, you must already have been there in programming, but Chapman will gradually take you to whatever level you deisre, depending on what you need. Very importantly, Chapman sprinkles throughout the text, several scientific and engineering examples and I guess it is why the text was so named in the first place - Fortran 90/95 for Scientists and Engineers.It doesn’t matter if you figure that you are way too cerebral and that Chapman is too simplistic for you. If you ever want to venture into programming, chances are that you are not an imbecile and any additional little knowledge gained is always an eternal treasure. This is an excellent text for programming in Fortran 90/95 and you’ll be grateful that you did own a copy. Period.

This book is an excellent presentation of the capabilities of Fortran 90 and 95. It is detailed enough to cover in depth many programming issues arising in practise, and also summarizes and gives good programming hints, allowing it to be used for quick reference. It also includes many actual source code examples which is the best way to show how all the theory becomes practice. It also includes extensive apendices with descriptions of the intrinsic functions of Fortran. In my opinion one of the best Fortran books that you can find currently.

I had some exposure to Fortran programming in several of my college courses, but have been lacking in the way of a good reference the few times since that I have had to work with Fortran code. As an engineer in an industry that relies heavily on codes written in Fortran, many of them with portions that are 20-30 years old, I was in search of a general reference book that would help me find my way through these codes. Luckily, a colleague had a copy of Fortran 90/95 for Scientists and Engineers, and I liked it enough to buy my own copy instead of borrowing his all the time. I find this book to be very helpful not only because of its concise and clear explanations of Fortran syntax and programming tips, but also because it explains how to understand code written for older versions of Fortran (don't worry, the author clearly labels the old constructs and warns against using any outdated methods). I would recommend this book to anyone interested in better understanding Fortran code in general. It is quite suitable for beginners, as well, with multiple examples and exercises (with answers available on the author's website). I give it only four stars for the simple reason that five stars implies perfection, and there's always room for improvement in any endeavor. By far the best Fortran reference I've found so far, though...